

Datasheet: AHP499

Description:	SHEEP ANTI RAT TGN38
Specificity:	TGN38
Format:	Serum
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			■	
Immunohistology - Frozen	■			1/100 - 1/200
Immunohistology - Paraffin			■	
ELISA			■	
Immunoprecipitation			■	
Western Blotting	■			1/1000
Immunofluorescence	■			
Immuno-electron Microscopy	■			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Rat
Species Cross Reactivity	Reacts with: Mouse N.B. Antibody reactivity and working conditions may vary between species.
Product Form	serum diluted - liquid

Antiserum Preparation Antisera to TGN38 were raised by repeated immunisations of sheep with highly purified antigen.

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Immunogen	Recombinant fusion protein corresponding to extracellular domain of TGN38.
External Database Links	UniProt: P19814 Related reagents

Entrez Gene:

[192152](#) Tgoln1 [Related reagents](#)

Specificity

Sheep anti Rat TGN38 antibody recognizes rat TGN38, a 357 amino acid single pass trans membrane glycoprotein found primarily in the Trans-golgi network, and acts as an excellent marker for this cellular organelle ([Humphrey *et al.* 1993](#)).

TGN38 is likely to have a role in intracellular transport ([McNamara *et al.* 2004](#)) and plays a role in morphological maintenance ([Girotti and Banting 1996](#)). It is the homologue of human TGN46 and macaque TGN47 ([Ponnambalam *et al.* 1996](#)).

Immunohistology

Fixation with methanol or methanol/acetone recommended.

References

1. Vo, Y.P. *et al.* (2004) Recycling of the dense-core vesicle membrane protein phogrin in Min6 beta-cells. [Biochem Biophys Res Commun. 324: 1004-10.](#)
2. Prabhu, Y. *et al.* (2014) Defective Transport of the Obesity Mutant PC1/3 N222D Contributes to Loss of Function. [Endocrinology. 155: 2391-401.](#)
3. Ni-Komatsu, L. *et al.* (2008) Identification of quinolines that inhibit melanogenesis by altering tyrosinase family trafficking. [Mol Pharmacol. 74:1576-86.](#)
4. Mathews, P.M. *et al.* (2002) Alzheimer's disease-related overexpression of the cation-dependent mannose 6-phosphate receptor increases Abeta secretion: role for altered lysosomal hydrolase distribution in beta-amyloidogenesis. [J Biol Chem. 277: 5299-307.](#)
5. Phillips, S.E. *et al.* (2006) Specific and nonspecific membrane-binding determinants cooperate in targeting phosphatidylinositol transfer protein beta-isoform to the mammalian trans-Golgi network. [Mol Biol Cell. 17: 2498-512.](#)
6. Waugh, M.G. *et al.* (2011) Detergent-free isolation and characterization of cholesterol-rich membrane domains from trans-Golgi network vesicles. [J Lipid Res. 52: 582-9.](#)
7. Farah, C.A. *et al.* (2006) Tau interacts with Golgi membranes and mediates their association with microtubules. [Cell Motil Cytoskeleton. 63: 710-24.](#)
8. Hesse, D. *et al.* (2010) Altered GLUT4 trafficking in adipocytes in the absence of the GTPase Arfrp1. [Biochem Biophys Res Commun. 394: 896-903.](#)
9. Miranda-Saksena, M. *et al.* (2002) In rat dorsal root ganglion neurons, herpes simplex virus type 1 tegument forms in the cytoplasm of the cell body. [J Virol. 76: 9934-51.](#)
10. Procino, G. *et al.* (2006) Adipocytes support cAMP-dependent translocation of aquaporin-2 from intracellular sites distinct from the insulin-responsive GLUT4 storage compartment. [Am J Physiol Renal Physiol. 290: F985-94.](#)
11. Han, L. *et al.* (2008) A large form of secretogranin III functions as a sorting receptor for chromogranin A aggregates in PC12 cells. [Mol Endocrinol. 22: 1935-49.](#)
12. Probst, O.C. *et al.* (2006) The 46-kDa mannose 6-phosphate receptor does not depend on endosomal acidification for delivery of hydrolases to lysosomes. [J Cell Sci. 119 \(Pt 23\): 4935-43.](#)
13. Wasmeier, C. *et al.* (2006) Rab38 and Rab32 control post-Golgi trafficking of melanogenic enzymes. [J Cell Biol. 175: 271-81.](#)
14. Hou, J.C. *et al.* (2006) A specific dileucine motif is required for the GGA-dependent entry of newly synthesized insulin-responsive aminopeptidase into the insulin-responsive compartment. [J Biol Chem. 281: 33457-66.](#)
15. Fortin, M.E. *et al.* (2006) Modulation of GJA1 turnover and intercellular communication by proinflammatory cytokines in the anterior pituitary folliculostellate cell line TtT/GF. [Biol Reprod. 74: 2-12.](#)
16. Vasile, E. *et al.* (2006) IntraGolgi distribution of the Conserved Oligomeric Golgi (COG) complex. [Exp Cell Res. 312: 3132-41.](#)
17. Acquatella-Tran Van Ba, I. *et al.* (2011) Reg-1α is a new neuronal secreted factor that stimulates neurite outgrowth via the Exostosin tumor-like 3 (EXTL3) receptor. [J Biol Chem. 287:](#)

[4726-39.](#)

18. Watanabe, T. *et al.* (2012) A unique ball-shaped Golgi apparatus in the rat pituitary gonadotrope: its functional implications in relation to the arrangement of the microtubule network. [J Histochem Cytochem. 60: 588-602.](#)
19. Yamamoto, H. *et al.* (2016) Posttranslational processing of FGF23 in osteocytes during the osteoblast to osteocyte transition. [Bone. 84: 120-30.](#)
20. Koga, D. *et al.* (2015) Correlative Light and Scanning Electron Microscopy for Observing the Three-Dimensional Ultrastructure of Membranous Cell Organelles in Relation to Their Molecular Components. [J Histochem Cytochem. 63 \(12\): 968-79.](#)
21. Mukai, K. *et al.* (2016) Activation of STING requires palmitoylation at the Golgi. [Nat Commun. 7: 11932.](#)
22. Koga, D. *et al.* (2017) Changes in the three-dimensional ultrastructure of membranous organelles in male rat pituitary gonadotropes after castration. [Biomed Res. 38 \(1\): 1-18.](#)
23. Kusumi, S. *et al.* (2018) Combination of a cryosectioning method and section scanning electron microscopy for immuno-scanning electron microscopy. [Biomed Res. 39 \(1\): 21-25.](#)

Further Reading

1. Luzio, J.P. *et al.* (1990) Identification, sequencing and expression of an integral membrane protein of the trans-Golgi network (TGN38). [Biochem J. 270: 97-102.](#)

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10040 available at:
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Sheep IgG (H/L) (5184-2304...) [Biotin](#)

Donkey Anti Sheep IgG (STAR88...) [DyLight®488](#), [DyLight®549](#), [DyLight®649](#),
[FITC](#), [HRP](#)

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